

In the United States Patent and Trademark Office

In re Application of:

BLANK, Arthur

Art Unit: 2172

Serial No.: 09/775,986

Examiner: Chen, Chongshan

Filed: February 2, 2001

Invention: ACUMATCH CROSS-MATCHING SYSTEM

\* \* \* \* \*

APPEAL BRIEF

Hon. Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231

Sir:

This is an Appeal from the final rejection of Claims 1-4, 7-12 and 15-19 of the subject application. No claims stand allowed.

STATUS OF CLAIMS

Claims 1-4, 7-12 and 15-19 are pending in the application. The rejection of all of Claims 1-4, 7-12 and 15-19 is appealed. Please see Appendix A for a clean copy of the claims under appeal.

STATUS OF AMENDMENTS

On July 14, 2003 the Appellant filed amendments to claims 1, 12, and 17. In the Final Action dated September 29, 2003, the Examiner objected to the amended claims, noting a

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discrepancy between the redlined versions and clean versions thereof. It was the Appellant's intent to file the amendments as offered in the redlined versions of the claims. On January 29, 2004, Appellants filed an Amendment under Rule 1.116 in response to the Final Action. Appellant's received an Advisory Action on February 12, 2004 which declined to enter their Amendment under Rule 1.116. Therefore, this appeal is from the pending claims as of July 14, 2003, including the amendments to claims 1, 12, and 17 as offered in the redlined versions. Clean versions of all pending claims are attached hereto as Appendix A.

#### SUMMARY OF INVENTION

The present invention is a software method for weighted cross-matching of characteristics of people, places, merchandise, books, gifts, etc. The cross-matching software can find and/or report on near-matches based on rank preferences and percent of accuracy. The cross-matching system comprises a registration procedure by which each user completes an entry record or "profile" comprising a self-description of "I AM", as well as a section of "I WANT" information reflecting the information reflecting the characteristics of the person that the user is searching for. Both the "I WANT" information and "I AM" information includes an unlimited number of categories each with an unlimited number of subcategories, and unlimited choices per sub-category. Each sub-category may allow only a single choice or any combination of choices (such as, for instance, all, either one of, any of, or none). Subsequent users seeking to find a match will complete a query record of like information. Given the registration database and a

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query record, the cross-matching software of the present invention will cross-match the actual characteristics with the desired characteristics by assigning a positive score for each match that is weighted in accordance with the preference ranking *and* by assigning a negative score for each match that is weighted in accordance with the preference ranking. Nominal scores are assigned where a user has indicated "no preference". The independent claims 1 and 12 reflect these mechanics quite specifically by requiring "assigning a positive integer numerical score for each match that increases in accordance with an increasing preference ranking, assigning a nominal positive numerical score for each match designated no-preference, and assigning a zero or negative score to each non-match..." Given these mechanics the matching engine then totals the scores and give a more accurate objective match based on subjective input data.

The above constitutes a concise explanation of the invention defined in claim 1 involved in the Appeal.

#### SUMMARY OF PROSECUTION HISTORY

The application was filed as provisional application No. 60/180,094 on February 3, 2000, and was timely converted on February 2, 2001. A first Official Action was mailed on 14 April 2003. Appellants responded and filed an Amendment dated 14 July 2003, with changes in the claims. A second and final Official Action was mailed on 21 October 2003. On January 29, 2004, Appellants filed an Amendment under Rule 1.116 in response to the final Office Action dated 29 September 2003, proposing further amendments to the claims. Appellant's received an

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Advisory Action on February 12, 2004 which declined to enter their Amendment under Rule

1.116. Thus, the claims are as amended per Appellants one and only Amendment filed 14 July 2003.

#### RELATED APPEAL PROCEEDINGS

None

#### REAL PARTY IN INTEREST

The real party in interest is an assignee, British Far East Holdings Ltd., 14911 Caminito Ladera, Del Mar, CA 92014-3929.

#### ISSUES

There are two categorical issues set forth as follows:

1st: Whether claims 1-4, 7, 12-17 and 20 are anticipated under 35 U.S.C. 102(e) over Sutcliffe et al. (U.S. Patent No. 6,052,122)?

2nd: Whether claims 1-4, 7-12 and 15-19 are obvious under 35 U.S.C. 103 over the combination of Sutcliffe et al. '122 and Shorter (5,946,681)?

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### GROUPING OF CLAIMS

The claims include two independent sets as follows.

Group 1: Claims 1-4, 7-11 (method of compiling data and cross-matching).

Group 2: Claims 12 and 15-19 (computer system including user interface with a succession of computer forms for compiling data, and cross-matching engine).

The appellant hereby states that all the rejected claims, despite the groupings, stand or fall together.

Appellant realizes that by its previous amendment certain depending claims were left to depend from canceled claims. Appellant tried to correct this in its Rule 1.116 amendment which was not entered. For purposes of this appeal Appellant acknowledges that these claims stand or fall with their parent claims (claim 1 being parent of claims 7-11, and claim 12 being parent of claims 15-19) and will correct the dependency situation, if possible, upon further prosecution.

### APPELLANTS' ARGUMENT

1: Claims 1-4, 7-12 and 15-19 are not anticipated under 35 U.S.C. 102(e) by Sutcliffe et al. (U.S. Patent No. 6,052,122).

The Examiner rejected claims 1-4, 7-12 and 15-19 under 35 U.S.C. 102(e) as being anticipated by Sutcliffe et al. (U.S. Patent No. 6,052,122). According to the Examiner, Sutcliffe

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et al. '122 discloses each and every element of claims 1-4, 7-12 and 15-19. Sutcliffe does suggest a preference-ranked query..."Thus, for twenty criteria elements, the elements would be assigned a priority from one to twenty, with each element having a unique priority between one and twenty inclusive. The priority data assigned to each element can be included as part of a search string." (Column 9, lines 25-36). Thus, for each criteria data element that matches a corresponding characteristic data element of another user a number of points corresponding to the weight would be added to a running total...to prioritize the closest registration records based on said query record" (Sutcliffe, col. 9, lines 59-65). While Sutcliffe weighs each match, he clearly does not weight each non-match and each no-preference item as well. It is clear after reading column 10, lines 5-19 of Sutcliffe that non-matches are not even considered. This is because he states that where there are no matches, there are no results and the search must be repeated (column 10, line 13). Both independent claims 1 and 12 require "assigning a positive integer numerical score for each match that increases in accordance with an increasing preference ranking, assigning a nominal positive numerical score for each match designated no-preference, and assigning a zero or negative score to each non-match..." Given this particular preference rating the matching engine then totals the scores. Nowhere does Sutcliffe teach or suggest "assigning a nominal positive numerical score for each match designated no-preference, and assigning a zero or negative score to each non-match". In view of this limitation, Appellant contends that claims 1 and 12 are patentably distinguished.

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The Examiner apparently misreads column 10, lines 5-19 of Sutcliffe and draws a misguided inference therefrom. He notes that the Sutcliffe user can assign preference rankings to data elements, inclusive of no-preference (citing column 5, lines 28 through column 6, line 6). He also notes that the Sutcliffe user can choose a weight to be assigned to each data element. From this the Examiner infers that Sutcliffe's system assigns weight to non-match and no-preference items. The Examiner's inference is improper because Sutcliffe does not explicitly teach or suggest assigning weight to non-match and no-preference items. This feature cannot be considered inherent because if Sutcliffe used it he would not need to rerun the query with different parameters each time a query returns no matches (as stated at column 10, line 13).

Claims 2-4, 7-12 and 15-19 are intended to depend from claims 1 and 12, respectively, and are similarly distinguished.

2: Claims 1-4, 7-12 and 15-19 are not obvious under 35 U.S.C. 103 over the combination of Sutcliffe et al. '122 and Shorter (5,946,681).

Despite his foregoing 102(e) argument to the contrary, the Examiner here acknowledges that Sutcliffe et al. '122 does not "assign a zero or negative score to each non-match..."

This is credited to Shorter '681 (column 6, lines 41-67). The Shorter '681 patent discloses a method for identifying unknown data files that may pertain to a particular individual by matching weighted identifying attributes of that individual with data contained in the file. Shorter '681 relates to several data processing systems operating collaboratively over the internet (Col. 3, lines 5-20) and more particularly to a method for determining an object identifier for an object within a

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plurality of data processing system networks (Col 4, lines 54-64). The patent describes how an object (i.e. a data file) includes various attributes (data such as last name, first name, social security number, gender, etc.) and is assigned a unique object identifier that is required for access to the object. The invention relates to using the attributes of the object to determine the object identifier so that the object may be retrieved from the database. (See Col. 6, lines 19-40). A system administrator gives particular attributes a name (i.e. last name, social security number, etc.) and a value. The value is given a weight (positive or negative) based upon the objective probability (not a subjective preference as in the present invention) that an exact match of a particular attribute will produce an exact match for the entire object or a non-match will be indicative of a non-match. (See Col. 6, lines 41 - Col. 7, line 4). For example, a match of a social security number attribute would be weighted high positive, whereas a non-match would be weighted high negative. This means that if you are searching for a data file on someone whose SSN is 000-00-000 and a data file "x" includes a social security number attribute (a match), it is highly likely that data file "x" was compiled for the person whose data file you are looking for. Whereas if the social security number attribute is different (a non-match), it is highly likely that data file "x" is not the file you want. On the other hand, a match or non-match for a first name would have minimal value positive or negative. (See Col. 6, lines 41-Col. 7, line 4). Criteria for the process of determining an object identifier through object attribute analysis may consist of single attributes or combinations of attributes that are input by a system administrator, keeping in mind that some combinations of attributes will be insufficient to produce a match. (See Col 7, lines 20-55). In a loose sense, the system administrator using the Shorter method may be



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considered as assigning a positive integer numerical score for each match that increases in accordance with an increasing preference ranking. Despite this, and contrary to the Examiner's statement, Shorter '681 (column 6, lines 41-67) does not assign "a nominal positive numerical score for each match designated no preference", nor does he "assign[ing] no score to each non match" as required by claims. Indeed, he assigns a negative score to non-matches. One skilled in the art would not think to alter Shorter '681 to conform to the present claims because Shorter is not attempting to match subjective data identifying and describing user wants and don't wants. According to MPEP §2143, the first criteria for establishing prima facie obviousness is that the prior art references when combined must teach or suggest all the claim limitations. Regarding independent Claims 1 and 12, neither Sutcliffe et al. '122, nor Shorter '681 disclose a cross-matching method or system that includes the features of (1) having the registered users enter subjective data identifying and describing their wants and do not wants, and (2) assigning a nominal positive numerical score for each match designated no preference and assigning no score to each non match" as required by these claims.

Claims 2-4 depend from claim 1, and claims 3, 4, 8, 9 and 11 are intended to depend from claim 1. These claims include the same unique features and are likewise distinguishable over Sutcliffe et al. '122 in view of Shorter '681.

Claim 10 further includes the additional feature of assigning a maximum positive score for each comparison when said preference ranking is equivalent to "must" and the actual characteristic matches or when said preference ranking is equivalent to "must not be" and said

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actual characteristic is a non-match. Again, neither Sutcliffe et al. '122, nor Shorter '681 disclose this feature.

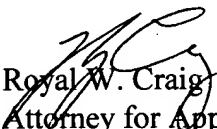
Claims 16, 17, 18 and 19 are intended to depend from Claim 12 and include the same unique features, and are likewise distinguishable over Sutcliffe et al. '122 in view of Shorter '681.

\* \* \* \* \*

For the reasons set forth herein, it is believed that the Examiner erred and that this application clearly and patentably distinguishes over the prior art and is in proper condition for allowance.

Reversal is respectfully requested.

Respectfully submitted,

  
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## APPENDIX A: Claims Under Appeal

Claim 1: A method for matching one set of wants with a database of profiles based on cross-matching of corresponding want data to profile data, comprising the steps of:

- compiling a database of registration records each identifying and describing actual characteristics of an entity;

- compiling a query record comprising desired characteristics of an entity and incremental preference rankings associated with said desired characteristics by prompting a user to enter subjective data identifying and describing their wants by a series of online forms displaying a range of discrete choices for each data element, plus a range of user-selectable preference levels for each data element;

- matching said actual characteristics with said desired characteristics and assigning a positive integer numerical score for each match that increases in accordance with an increasing preference ranking, assigning a nominal positive numerical score for each match designated no-preference, and assigning a zero or negative score to each non-match; and

- totaling said scores to prioritize the closest registration records based on said query record.

Claim 2: The method for matching one set of wants with a database of profiles according to claim 1, wherein said step of matching said actual characteristics with said desired characteristics further comprises assigning a score for each non-match that is weighted in accordance with said preference ranking.

Claim 3: The method for matching one set of wants with a database of profiles according to claim 1, wherein said database of registration records identify and describe actual characteristics

of people, and said step of compiling a database of registration records further comprises prompting successive users to each enter a profile of objective data identifying and describing themselves by a series of online forms presented to said users by a computer.

Claim 4: The method for matching one set of wants with a database of profiles according to claim 3, wherein said step of compiling a query record describing desired characteristics of an entity further comprises prompting a user to enter subjective data identifying and describing their wants by a series of online forms presented to said user by a computer, plus prompting said user to enter a subjective preference ranking associated with each want data element to indicate importance thereof.

Claims 5 and 6 (previously canceled).

Claim 7: The method for matching one set of wants with a database of profiles according to claim 5, wherein said user-selectable preference levels are assigned numerical values.

Claim 8: The method for matching one set of wants with a database of profiles according to claim 6, wherein said user-selectable preference levels are assigned numerical values.

Claim 9: The method for matching one set of wants with a database of profiles according to claim 8, wherein said assigned numerical values are as follows: "must"=1, "strongly want"=2, "want"=3, "don't care or no preference"=4, "don't want"=5, "strongly don't want"=6 and "must not be"=7.

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Claim 10: The method for matching one set of wants with a database of profiles according to claim 8, wherein said step of matching said actual characteristics with said desired characteristics by assigning a score for each match that is weighted in accordance with said preference ranking is further comprises assigning a maximum score for each positive comparison of query data with profile record when said preference ranking is equivalent to "must" or "must not be" and said data element is a non-match.

Claim 11: The method for matching one set of wants with a database of profiles according to claim 10, wherein said step of matching said actual characteristics with said desired characteristics by assigning a score for each match that is weighted in accordance with said preference ranking further comprises assigning a minimum score for each positive comparison of query data with profile record when said preference ranking is equivalent to "don't care or no preference".

Claim 12: An automated system for matching a set of desired subjective characteristics to a most suitable profile of actual objective characteristics from among a database of such objective profiles, comprising:

a database of profile records each comprising a collection of data elements describing actual objective characteristics of an entity;

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a succession of computer forms navigable by a graphical user interface for prompting a user to enter a query record describing desired characteristics of an entity, said query record including a plurality of incremental preference rankings associated with said desired characteristics;

a computer software matching engine for scoring the conformity of the query record of desired characteristics with said profile records of actual characteristics based on correspondence of said data records as statistically weighted by said preference rankings, said matching engine assigning a positive integer numerical score for each match that increases in accordance with an increasing preference ranking, assigning a nominal positive numerical score for each match designated no-preference, and assigning a zero or negative score to each non-match, said matching engine then totaling said scores;

an output display for displaying a list of profile records that conform to said query record in prioritized order of the matching engine score.

Claims 13 and 14 (previously canceled).

Claim 15: The automated system for matching a set of desired subjective characteristics to a most suitable profile of actual objective characteristics according to claim 13, wherein said profile records each identify and describe actual characteristics of people.

Claim 16: The automated system for matching a set of desired subjective characteristics to a most suitable profile of actual objective characteristics according to claim 15, wherein said query

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records include subjective data identifying and describing a user's wants plus a subjective preference ranking associated with each want to indicate importance thereof.

Claim 17: The automated system for matching a set of desired subjective characteristics to a most suitable profile of actual objective characteristics according to claim 16, wherein said succession of computer forms prompts a user to enter subjective data identifying and describing their wants by displaying a range of discrete choices for each data element, plus a range of user-selectable preference levels for each data element.

Claim 18: The automated system for matching a set of desired subjective characteristics to a most suitable profile of actual objective characteristics according to claim 17, wherein said user-selectable preference levels further comprise at least seven discrete preference levels substantially corresponding to "must", "strongly want", "want", "don't care or no preference", "don't want", "strongly don't want" and "must not be".

Claim 19: The automated system for matching a set of desired subjective characteristics to a most suitable profile of actual objective characteristics according to claim 17, wherein said user-selectable preference levels further comprise at least seven discrete preference levels.

Claim 20 (previously canceled).